



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,184	01/18/2001	Duane Joseph Buening	DP-300203	6840

7590

05/06/2003

MARGARET A. DOBROWITSKY
DELPHI TECHNOLOGIES, INC
Legal Staff Mail Code: 480-414-420
P.O. Box 5052
Troy, MI 48007-5052

EXAMINER

MOHANDESI, IRAJ A

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/765,184

Applicant(s)

BUENING ET AL.

Examiner

Iraj A Mohandesi

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hayashi US (5,274,322)** in view of **Robert Rosenberg** "Electric Motor Repair (third edition) Copyright 1988, Saunders College Publishing;

Hauashi'322 discloses an alternating current generator comprising; a stator (16); and a rotor (18), the rotor comprising a plurality of pole pairs (column 5, line 54) the stator comprising a first and second winding are three phase windings (10); the first and second windings are physically offset one relative to another (Fig. 6); wherein the first winding wound in one of Δ and Y configuration (12, "121-122-123) and the second winding wound in the other one of the delta connection (10, 101 "02" 103 "); a stator comprising ; a substantially annular portion; a plurality of teeth extending radially inwardly from the annular body portion; a plurality of slots defined between said teeth; at least two winding wound around said teeth and insert in to the slots (Fig. 6) ; the windings are three phase winding (column 3, line 41, 46) the first and second winding are connected to a rectifier bridge (11, Fig. 1); the stator further comprising a plurality of teeth defining a plurality of slots; (Fig. 6) ; the first and second winding are positionally shifted from each other an electrical angle of 30 degree (column 2, line 13-17); With respect to claim 16. having $p=3$

(p, number of phases) the equation $90/p$ will inherently result in a 30 degree angle.

However **Hauashi'322** teaches all limitation of claimed invention except only a stator comprising a first winding wound in full pitch pattern with at least one complete loops surrounding a first predetermined number of teeth of said stator and second winding wound in a short pitch pattern with at least one complete loop surrounding a second predetermined number of said teeth ,said predetermined number being different than said second predetermined number.

Robert Rosenberg teaches in the "Electric Motor Repair (third edition) Copyright 1988, Saunders College Publishing ; in chapter 3 three phase electrical machine, page 163 ,164 Fig. 3-97 and 3-99 a winding pattern for a stator comprising ;a stator (n fig. 3-99 page 164)comprising a first winding wound in full pitch pattern with at least one complete loops surrounding a first predetermined number of teeth of said stator and second winding wound in a short pitch pattern with at least one complete loop surrounding an adjacent second predetermined number of said teeth ,said predetermined number being different than said second predetermined number for the purpose reducing the torque .

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine **Hauashi'322** vehicle generator with a stator having a first winding wound in full pitch pattern with at least one complete loops surrounding a first predetermined number of teeth of said stator and second winding wound in a short pitch pattern with at least one complete loop surrounding an adjacent second

predetermined number of said teeth as was taught by **Robert Rosenberg** to advance an operating function while creating less torque ripple .

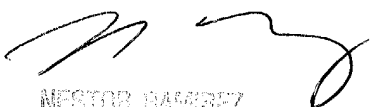
Communication

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Iraj A Mohandesi whose telephone number is (703)305-3242. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-0377.

IM
April 30, 2003


NESTOR RAMIREZ
SUPERVISOR, PATENT EXAMINER
TECHNOLOGY CENTER 2800